

Fox Trails

A systematic approach for web development inspired by
Ruby on Rails.

Introduction

— [Fox Trails is a new approach to web application development that utilizes concepts from the Ruby on Rails web application framework to reduce the complexity of integrating web sites with Foxpro applications.

Tenets of Ruby on Rails

— [There are two main tenets adhered to by Ruby on Rails frameworks. These tenets help to drastically simplify web development and deployment.

— [The first of these is DRY or “Don’t repeat yourself”.

— [The second is “Convention over Configuration”.

Traditional Web Development

Code intermingled with presentation layer

Repetitious data access statements

Tedious configuration settings

```
<body>

<%
set conn=Server.CreateObject("ADODB.Connection")
conn.Provider="Microsoft.Jet.OLEDB.4.0"
conn.Open(Server.MapPath("/db/northwind.mdb"))

set rs = Server.CreateObject("ADODB.Recordset")
rs.Open "SELECT Companyname, Contactname, Contacttitle FROM Customers"
%>

<table border="1" width="100%">
<%do until rs.EOF%>
  <tr>
    <%for each x in rs.Fields%>
      <td> <%Response.Write(x.value) %>
    <%next x%>
    rs.MoveNext%>
  </tr>
<%loop%>
rs.close
conn.close
```

Ruby on Rails Example

— [Reflection used to eliminate
repetitious data access
statements

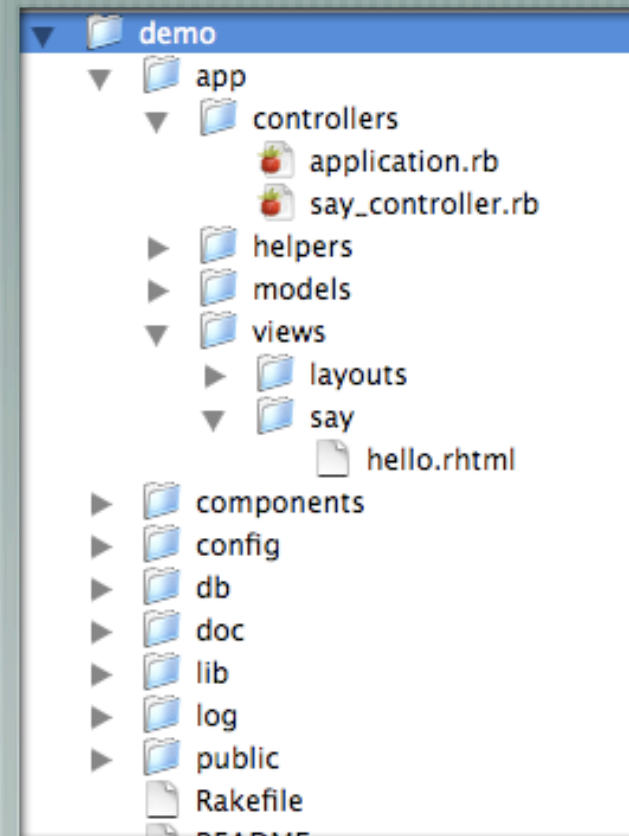
— [MVC Architecture eliminates
intermingled code

— [Naming conventions to
eliminate configuration
issues



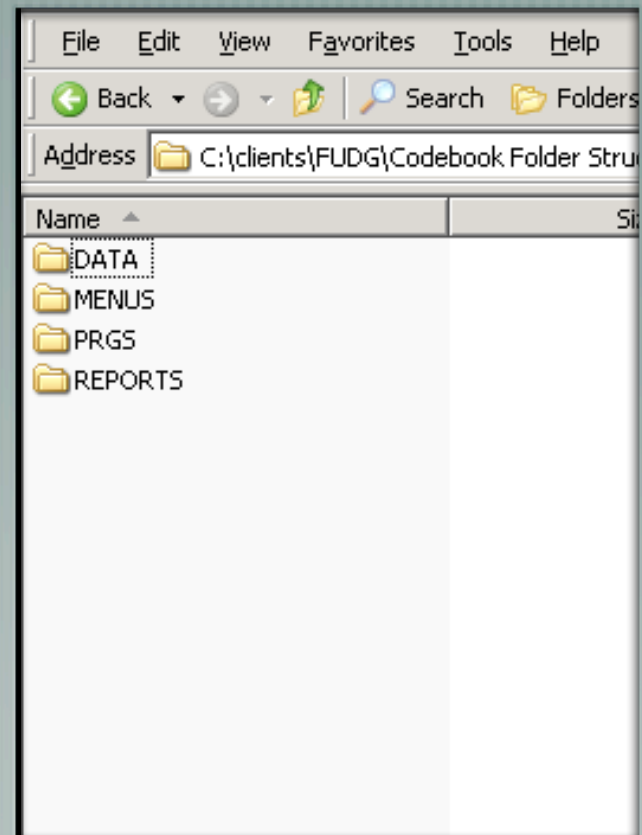
Rails Folder Structure

Nested folders help organize the application thereby eliminating configuration issues.



Codebook Standards

Years ago, Yair Alan Griver introduced Foxpro developers to nested folder structures to aid in easier configuration.

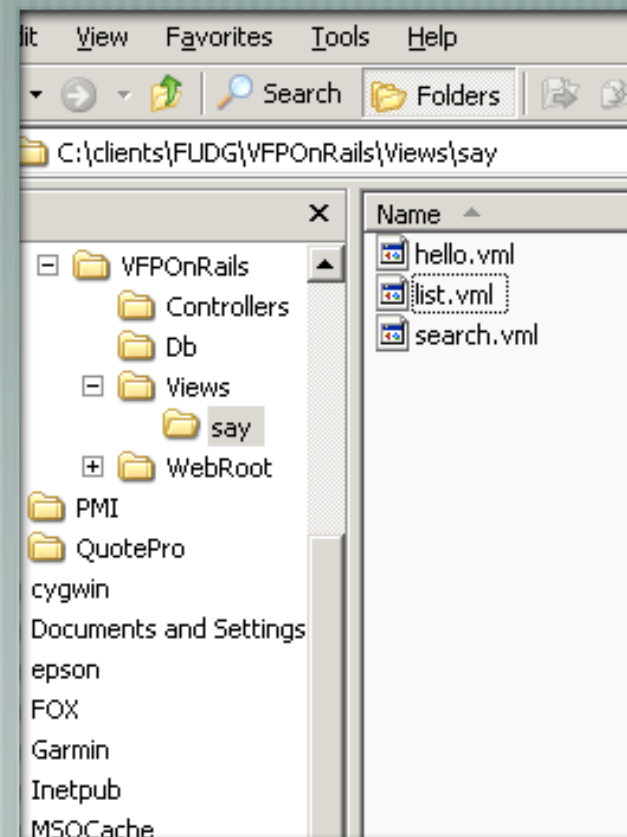


Bringing Rails to VFP

- [On a recent development project, I developed a VFP COM server that was accessed from an ASP.Net web page.
- [The client pages were implemented with an AJAX javascript library named Prototype.
- [Prototype is used extensively by Ruby on Rails developers, so I began experimenting with implementing Rails features in VFP...

Fox Trails

- Use of MVC architecture
- Folder structure eliminates configuration issues
- One OLEPUBLIC class
- Naming conventions associate views with controllers.



MVC Architecture

- [Model = Data access layer
- [View = What the user sees, not a database view
- [Controller = Controls program flow, business logic

Folder Structure

Using standardized naming conventions and folder hierarchies allows programmers to concentrate on development instead of wasting time building mechanisms for setting and storing configuration settings.

Typical Application Structure

Controllers

Shop.prg

Db

Products.dbf

Customers.dbf

Views

Shop

AddItem.vml

RemoveItem.vml

List.vml

WebRoot

Default.aspx

One OLEPUBLIC class

- [Only one class is compiled into the dll and is made available via the OLEPUBLIC keyword, virtually eliminating re-registration issues since the dll should rarely need to be recompiled.
- [This class is derived from VFP's Session class, thereby ensuring that each execution thread receives it's own data session.
- [It's DispatchRequest method ensures that the right controller is invoked for the requested URL.

Naming conventions

- [`http://hostname/default.aspx/somecontroller/method/parameter1/parameter2/...`
- [`C:\path_to_application\Controllers\somecontroller.prg`
- [`C:\path_to_application\Views\somecontroller\method.vml`

VFP Code Review

Resources

[<http://www.marquisenenterprises.biz:90/svn/FoxTrails>

[<http://fox.wikis.com/wc.dll?Wiki~FoxTrails>

[<http://prototypejs.org/api>

[<http://www.rubyonrails.org/>

[<http://www.west-wind.com/presentations/aspobjects/ASPObjcts.htm>

Summary

- [Use of DRY and Conventions can greatly simplify the development of web applications powered by a Visual Foxpro database backend.
- [Native VFP commands can be used for developing web pages.
- [Web 2.0 features can be easily incorporated into web pages by using the excellent Prototype javascript library.